

# SEQUENCE LISTING

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<120> COMPOSITIONS AND METHODS OF DIAGNOSING, MONITORING,  
STAGING, IMAGING AND TREATING COLON CANCER

<130> DEX-0201

<140>

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<150> 60/192,667

<151> 2000-03-28

<160> 75

<170> PatentIn Ver. 2.1

<210> 1

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tattatgtat taaaatatct ttacaaaatg gatttgctgc tcctgggtcca cttctgctca 480
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<213> Homo sapiens

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<212> DNA  
<213> Homo sapiens

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tgacttacct taaacgtatg ctaacaaaat acacacacca gaaactggaa cagaagtaac 240  
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<211> 570

<212> DNA

<213> Homo sapiens

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<211> 540

<212> DNA

<213> Homo sapiens

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 <212> DNA  
 <213> Homo sapiens

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<210> 23  
 <211> 108  
 <212> DNA  
 <213> Homo sapiens

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 <212> DNA  
 <213> Homo sapiens



<400> 24

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<211> 287

<212> DNA

<213> Homo sapiens

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tcaatgcttc ccactttcaa ggtaagtcatt attaatgaag acctgctgtg caccatgcta 180
ggccaaagag gctttcatat acagtcattgc accactgaac accagggata gattctgaga 240
aatgcattgt taggtgattt cgtcattatg caaatgtcag agagtgc 287
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<210> 26

<211> 550

<212> DNA

<213> Homo sapiens

<400> 26

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 aagtgagaaa aatctccttg catttatattt attctgtgtc aaggattcaa gtgggcatga 180  
 ttttctgtaa tcccacacag cccttcatag ctaaaagtta atatttccaa ctggttgctt 240  
 tgagattcca tacatatggc ttaggaatga agtcacccac tatttccata ttgagaaata 300  
 aattatggac accatctcta gaattcagtt tctttaata agctgaagat ttgttctctt 360  
 tttctccact atgtttctat gctagt 386

<210> 29  
 <211> 696  
 <212> DNA  
 <213> Homo sapiens

<400> 29  
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 gattaattca tccagttcat atccagtga cagtttaatc ctgcactttt tctgctgagt 120  
 aatattgctt gttctaaatg gcactcttga gtcaatgtgt tcacctcgct taggagagca 180  
 gcttatttat tgttataaat atgcttatct gaaagtaaat ttatttttgc aatgccccat 240  
 ccgtagtcat tgaaagatat aaataataag gtgatatggc atttttgagt tttgatatag 300  
 tctgctaaaaa gggacttagt cgtcttatag tttcttgta gtaggattgg atcagcaatt 360  
 atttactgtt taagttttca aacatgtttc ttgccctcaa gtcctataac caaattttaa 420  
 tggcatttgt tttgtaatc aataactctt tatcataatt tatatttaca gtgttgattc 480  
 tgttgaacag gtatagacag taatgtttac attctacttg attaagttaa taatgtgtaa 540  
 ttgtttctat aaatttttaa gtatttcatt tgtggaaatt tgagttgctt tcgagttttc 600

tagttagt tattgatagt atatgaaatt gctagcaaat caatgacttt aacaaat ttt 660  
 tgttgtaaat cctttttttt cccttcgtct gtaggt 696

<210> 30  
 <211> 554  
 <212> DNA  
 <213> Homo sapiens

<400> 30  
 actaaataaa aattctagta aatattgaat tatattattc tttcagcaaa aaaatagtat 60  
 tttattatct ctacaaaatg tagaggggag tattctaggt aactgaatgt ttcttagcct 120  
 aacttcttgc ttgaagaagg ccttgaaaca aagacttgca tacagatagc ttatttttagc 180  
 aagtgatatc ctaaggaaca gtagcaagag acttgggagt gttaaacaga gaagattaaa 240  
 agccaattta agagtatgct gttgagctgc ttaattatgt aggcaactgc tcataaatct 300  
 tattgactac tcttggggtg ccttgtagaa cgcaccttca acttgagccc ttgaaacaag 360  
 gaaggcatga caatatgccg gcagactcct tttataattg gtgaagaatt ttcttaggtt 420  
 ttcttaacca cttgtgattt caggtttgtg atcaaaccag aatgactgag cggactcctg 480  
 ttagagtctt atgttctcag agaaatactg ggggagaaat ccagaggtaa gtatctcagc 540  
 caaggtaggag tgggt 554

<210> 31  
 <211> 589  
 <212> DNA  
 <213> Homo sapiens

<400> 31  
 cccgcccgtg tgatggatat ccgcagaatt cggcttttoga gcgccccccc ggccaggtct 60  
 cagagccttg gactctgaga tatcaatggg catcacataa agattagaag cccatatctt 120  
 ttcttttttt taaaagatat tgtttatgta ttttatatcc tgatggaaac ctgggagaca 180  
 ggagaccatc ataatgtccg agattgaata ttctgccagc ctgggtggat ggagtagaga 240  
 atcagaatta aattgaattt aaaaaagaca agggaagtta tgtttcttat agtttttagt 300  
 ttatgcattt cacatgatgt gaatcttctt cctcagcatc ccactcttct gaccagaaat 360  
 caggttactt tttagattct caataactct ccaaagctcc taaccaccat gaattttggg 420  
 cataaacttt tctgccttct tgtagggagt atgaaaatgt tatctgtggc atccccgat 480  
 ccatggggac ccaagcccca tttcattagg aatgattcac acttctcaaa ggcaaagtgc 540  
 tcaaagcata taaagtcttc ttggcctaac accttatgtt tctgtgggt 589

<210> 32  
 <211> 675  
 <212> DNA  
 <213> Homo sapiens

<400> 32  
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 ggggggggacc ttccccacaa aggaaaaaaa agttatttaa aaaaaccggt ttccggggaa 120

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accctgtctg gtgggtccct ctgggggtgcc cccctgttta tatgccaacc ccagaagcca 180
gcaggaaaga ggaatcccca aagccccata agagagtggg gccacaagg gaagataagg 240
aagcctctta atgaaatttc caggaagttg tctctgggaa gaggggtgcc tctggttaag 300
cgaaaaaacc cgggggggtg aaaaaacttg ccatgtgggc ccaaagagcc accaggtcc 360
cactgggcgg gaaaacacgg tgggtctcc acaggggggg gttatattcc tgcccagggg 420
ccctcgaacc tcattttggc ccgcggaaga ggtaatccgg gcgattccgc acaggggatc 480
tcgcggggag gggccgcaca aaaggcggat ttcaacgcca catggggggg gccgacaata 540
ggggacccga gttggtaccc acgttggggg gtaccatggg ccaaaggagg cccgggggga 600
aattggtttc cggccaatcc ccacatatca ccaacaaaag atgataaaaa agaaagacca 660
aaacaaaaga gacga
675

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<210> 33

<211> 582

<212> DNA

<213> Homo sapiens

<400> 33

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acttacctcc aattttcaca gatgatcatg cgccattttg tcggatacag agagctacac 60
tgaaaacaag caaatgaaca atgaaaagaa ctcattatct gtaaaagtaa gattactttt 120
agatctggtc tagaatctaa gctactctgg ctaagctatt ctttcagaca aaaccattct 180
cagctcccaa taataccata taaatgaatt tagggagcat agtgaatatg tagattagga 240
attgtatgta ttttctccat tcataaaaac acgttttgaa tctaaaactc aaatgcttat 300
ttttaagttt aaaattaaat aggaagtcgg ttttctgggt cattatagtc ccacttatcc 360
tgcaaatatg cagttagcac tctgatcaag aattctaaaa atttattttt atcaactccc 420
tagacaaagc aaacctaggt tatcccaaca cacataatat gtgtgatcct tacctctctt 480
agaaaaaaat acaatatgca atttgcagct tttcactcaa gggaaaaatg agtatgtgaa 540
caacatgaat atcataatat ttttaaaata ctcaacctaa gt
582

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<210> 34

<211> 558

<212> DNA

<213> Homo sapiens

<400> 34

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actacataga gtttctgcat taaatatcaa tgatcacaaa gggatatactt tttaaacacg 60
catttttcaa aggactgctt tcgctttcaa tttgagggtt attctcacct gaatatcttt 120
attctgaaac tgaacaaaac ctggaggaac cagactcctt agattaaatg tcattttgtt 180
taaaaaagca acattcacta aataatcaga tctcctatct tcttggcatc agaggaata 240
aatgccagggt gtaaacctaa gccagaagca aaaagtgtta aataaaaagt tcaaatatgt 300
tgctttcata aaggcaaaat ccaaatacct ttatcttttg aaatttcaat tttcggaaac 360
aatataaact gctgaagtaa ttataaacct attattcttt aatacaacaa ctagaactta 420
aaacagaatt gagaagtaat ttgaatggac tatggaatgg atactgtaaa tactatattt 480
tgaatatctg atatttcata taaaagaaa aaaatggaaa aaatttacia acaattattc 540
caaaatgtct attatatt
558

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<210> 35  
 <211> 567  
 <212> DNA  
 <213> Homo sapiens

<400> 35  
 acagcaaaag cccaggetcc accacgacac aatatatgca cgcaggaaat ctgtatttgc 60  
 accccctaaa tattttaaatt attttttaaaa ataattaaag aaaaaataag atggaatcaa 120  
 aatcataaca aagataaaaa ttatattaag ctctatgatg ttcattaaga acaataccta 180  
 aacataaaaa tgtagaattc tggaagatag gatgttaaac agtgattaga agacaaaatat 240  
 ttagcagaaa aaaaagctga tgtagttaca tagatatcag gcaaaagagg agataataaa 300  
 ggtaactgct acatgaataa aatagaccaa aagaaacaat aaaattgatc aaagaaactt 360  
 agagttaatt ctttgaaaaa aacgaataaa atggaatacc aagtttttct ttgacagaac 420  
 tcaaatacaa tcttgaggga agaaaacaag tgtataatga tacagactgt ttcatatcat 480  
 ttctatacat ttaactcag aaaacaatat tgcataattgc tcatggacct attaatgatt 540  
 taaaattata caaatggctg aaaggtc 567

<210> 36  
 <211> 583  
 <212> DNA  
 <213> Homo sapiens

<400> 36  
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 actagagccc aagttttctc attcttactg gtcaagtgga agcagtgaca tcttttgccc 120  
 aaagcagtaa aataaccttt tatttttccc ccaaacaat gctgccatat cccctaaata 180  
 gagaaacatc tatgtgagcc taacacacac atagcattgg caacatcttc aaaagtctag 240  
 gtgtggattt taatatgatg aagttgagtt ttacagttca cacaattcca ggtttcatag 300  
 tgataagaaa tgtggatcag aattgtgcct gctgtgtgaa ggtgatggca atcagggtcag 360  
 ccatccaagc aggatacact tgacagacag agctcccatg cagggtcccc aaatccaagc 420  
 aacatgtggc tcagagttgc caaagactgt gctttccttt cctggccctt caatgatata 480  
 tctccccaat gccttctctg catattttct ctctcaaatt cacggagggt ctcattagga 540  
 gagcagaaag gcctttcttc tagcactact cacttcccaa tga 583

<210> 37  
 <211> 521  
 <212> DNA  
 <213> Homo sapiens

<400> 37  
 actatttgac ttcctccttt atgtccgtgc ctttcctata aattgaaatt tgagttcaga 60  
 ggcttaactc agattaaact ttttgcaaaa aagactacat aagtagtgct gtgtgcttca 120  
 ttttgccaaa tttcccttca caggggttat acctgagaat gatgttaagc tttgagtttt 180  
 atgggtgcagt tctaattgac atttatttaa ttttagtgat gttaagcagc ctttcatatg 240  
 cttaagagcc atttctgttt aagggtattt aagcatatga aaggctgctt aacatcacta 300  
 aaaaaaaaaa aaaaaaaaaa aaaaaagggt gtggtcaaaa ttttggtctc tcgctgtacg 360

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gggaaaaaac aaagaaaggg ttgaccgcgc cggggggggcc gcataaagcg cgaatcccag 420
cacgggggggc gcggaaaaag ggggccccaa gcggataacc agcgggaggg agacagtagc 480
aaaggctgac cgtggggaaa atggtaccgg ctaaattcgc g 521

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<210> 38
<211> 322
<212> DNA
<213> Homo sapiens

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<400> 38
acaagctttt tttttttttt tttttttttg gcccaaaagg gggtaagggg ggtgctatgg 60
ggtaatttaa agttggaaca taaaattcta ttcttgggac aaccaagtta tcaccagggc 120
tcaattaccg tgccgcgggg ggcgcgttcg aaaagccgaa tttccagaca cagcgggggg 180
ccgttaactt agtgtggatc acgagcctcg gttcaccaag cttgtggcgt taattcatgt 240
ggttcattag cgtgattccc gttggtttga aatttgttta ctccgcttca tcaattctcc 300
accacacctt tacagacaca at 322

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```

<210> 39
<211> 306
<212> DNA
<213> Homo sapiens

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<220>
<221> unsure
<222> (220)

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<400> 39
acatatgtgg tttatcaaca ttgtataagc cattggccta aggactaaaa gcatgttaaa 60
aagaatgggg tcccttatat taagtgggta ataattgctt gttaacaatt ttaactctag 120
aataaatttc tctctctgaa gggccctgaa tctttatgtg aatattgcct atttatcaca 180
ttgtggagcc aagtgaacat taaaaaacta caataaacan cgtttaaagg aacaaaattc 240
tttcatagcg atacagacgc atactttttt tgaaatcaag aaaccacttc atcactctct 300
cccata 306

```

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<210> 40
<211> 487
<212> DNA
<213> Homo sapiens

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<220>
<221> unsure
<222> (160)

```

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<400> 40
cgcccgaggt acaagtccag gcagacttga aacaggctcc attctgagaa gccaatat 60

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agagagcttt tactgtttgt agacacagaa gagagatggt gtttcccatt ttatgtgggt 120  
 aagactaata gtaatactcc ttgtcatact cataactaan tgtaatttta aaagaaccat 180  
 gattgagaaa gcagtcctag atattcagca atttcttagc taatttaata tttgtgtata 240  
 aacattttgt aaactagaaa tgtaaatatt ttttaactttt aaatgggatt tactcctatg 300  
 tttttactta tttttaaaac tataggatga ttcctttgat aatttatatt taattttttc 360  
 ttaaatatac caccaacatc aaagtatttg tttccaactt attttatagt atgtttctaa 420  
 ttttcagaga gagaaatata cattctcatt ttgtcttctc ataaacaata ccatgaattt 480  
 gctctgt 487

<210> 41

<211> 402

<212> DNA

<213> Homo sapiens

<400> 41

gcaggtaactc agttaacttt tgaaaataaa ctcathttgtg ttgctgagcc aaagattgta 60  
 ttgcatgaat atgtcacagg catcagggtga atatttcaca gagatccaaa tgcctctta 120  
 taatgtaata ccatgccaaa gacccagag tttttttttt tttaaatata ctttcaaact 180  
 gcaaaggaat tgagtttatt atattaatag taatgcataat tgttatggta tttgaagtaa 240  
 tagccttccc aagtgaatag ttgctgtatt atattcctaat ttttgtttgt ttgtttgttt 300  
 taacgggaat gtctagtaaa tcaaagacca tttgttttcc atttctctga attttcagtg 360  
 tcaggatatg taacatcatt cgtatctggc acacctctat gt 402

<210> 42

<211> 222

<212> DNA

<213> Homo sapiens

<400> 42

acaagatgaa ctttagccaa gcaagagatg actaataaaa acttagcaaa aagatttatg 60  
 attaataacct tcagaaagtt ttataattaa acagtaaaat actctggtgg aagaaacatc 120  
 tgtgaataaa tgagaattag ctgatattct tctgttttat gcctttgcat ataataagag 180  
 tggggagcaa gtacctgccc gggcgccgc tcgaagccga at 222

<210> 43

<211> 244

<212> DNA

<213> Homo sapiens

<400> 43

gcaggtagcat ttgagaatga acctaattta ttaatgcaat ttcattagcc caacaaaata 60  
 taagagtgtc taagcccact atttttcttc tgggtgcttc ctggcaagca ttactgagtt 120  
 ataccaggta gtatttgcca ctataacgaa ctataaattg ataccaggac acaggcgaag 180  
 aaaaccgtgc ccaataactc ttcctttctt gagaaaaaca gtgagtctct gccatttgaa 240  
 gagt 244

<210> 44  
 <211> 603  
 <212> DNA  
 <213> Homo sapiens

<400> 44  
 acagaagatt acaaaatatt tgtcccttcc aatcctcagt caaatTTgaa gttcaacatc 60  
 atatgaagca attctgcatt ttaagcttct cagatgTTTT catagctgga gcaaacttag 120  
 aaatactaaa taactttggg cagactcttc atttccttac catgccagac ccaagcgaac 180  
 tactcactgt aacatcagag tagaggTTat tggaggatat cacttagagg tgtccaaaat 240  
 ctcccgtttt gtttaataat agtctgttaa tctcttaatc atctaaacca ttgcttctca 300  
 aaagaagatg ttggcatttg gtggtgacac tttttggtcg ttagaggctg tctagtgcac 360  
 agcaggacat ttaacatccc tgaactccag acactaaatg ccaggggcag ccccatccat 420  
 gtgatggaaa atctattccc acacatttcc aaatgcccct caagggttgg caccactact 480  
 tgattaggag ccactgtggt ggaacctttg aaattgattt ctgtttatgg tgaaggggcc 540  
 tagataggac agccttaggg tttaaaccga gaactacttt ctaagagggg gacttaggcg 600  
 cgc 603

<210> 45  
 <211> 428  
 <212> DNA  
 <213> Homo sapiens

<400> 45  
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 tttgctttca tttaggTccc atgatctttt acatttctta aatattTaaa tatcttcaaa 120  
 tattttaagtc ttaagtattt tattcataca tatggagcat tatatcaaac ttgatatttt 180  
 taaactgaca gatatgattt aaaaggTtca tgaggTctat tatatttggt ctacgtttac 240  
 cattTTTTtt ggTTTTTggt ggTTTTtatt tctttatga aattTaaagc gtgctaatag 300  
 catagcttat ctgtttggaa agtttccctt aattatgctt taaggcgaga tctactgata 360  
 acatattctc ttattttttc ttggtataag aaggTgttta ttttccttta attcctgaag 420  
 gatagttt 428

<210> 46  
 <211> 558  
 <212> DNA  
 <213> Homo sapiens

<400> 46  
 acctcttttg gaagaagttt accaaccact actctaacat gacagtaatc aaggtagtgg 60  
 tgctggaaaa agagacaagt agagcaatgg agccaactag aatctggaaa tagaccata 120  
 cctaataatat tttatatttt tgaaaaagac accaaagcaa tacaatgaga aaaggTcaat 180  
 ctttgtaaac aaataatgtt ggaaaatcag ttatccaaat agaaaaaatg attttctacc 240  
 tcaaatccat acatagaaat taattcaaac ttcttgaagg agccacagga gaacgtctcc 300



agaacottca gatagtgaca gattttttga ctaggacgta gaaattagtc gggtaagaaa 360  
acattgatga attgaacttt gtaagaattt taaagctctg ttcatacaaa tgcccaaatt 420  
aaaggacatt ctgaaaatac ctaagtggaa ctctgaaaaa ttgtcatgaa agacaagggg 480  
aacctgagaa actgtcatac aatgggaggg aaatgggagt catgacaaac aaatgtaatg 540  
tagtatcctg gatagggt 558

<210> 47  
<211> 453  
<212> DNA  
<213> Homo sapiens

<400> 47  
tcctgaaatg cacacccctt ttcttttggg aacacttgcg atcatattgc ccgccctgga 60  
ggggccgaat gcgtatttat attggttgtg gattttcgag aaagaatttg ggataggact 120  
taagtcacgg tgaaggaatt tcagtgtagt ggcactttga atgggtgtata aagagataaa 180  
tgaagttaat gggccaaagg ggaccacccc ctctgccaca cctgtggaag gtggcaccca 240  
tttctccggc tttaatgacc tgagagcttc cccgttttga gtgtagcctg aggaatatct 300  
gtggcagatg aggtcagaga tggcaacagg gatgagatcc cttatggccc cgtagacccc 360  
ctcacataga atttttagact ttatcctacg tgtaaatcag atctttttaa gagttttaaa 420  
aacggggata aaacccaaaa aaaaaaagct tgt 453

<210> 48  
<211> 546  
<212> DNA  
<213> Homo sapiens

<400> 48  
tattcatggc cttgatgtct cttaaagatga aagatgtaat tttttcatgt gtcttccatt 60  
tgattaccgt attactgttg tcagcttttg tattccctgg tggttgtgtg ggaaaaggg 120  
ataactcttc tatcttaaga gaagagattt ttttctctat ttgaggttgt atgttttaaa 180  
gctataattt taataagatc actagtgtga ttttggcatg atgacatgtt acatgcaaat 240  
gtttgaatgg gtgaaaactg aacatgtttt tgccacctag gcttttcaag ttctacagaa 300  
ctagaaatgc ggtatgcccc ataggcatct gttttacctg gttcccatag gctttctgag 360  
ccaatattat ttgtaatatc ttacatata actcttgcac aaaaaagtct ggttgggttt 420  
tatccagata aaatacatc tacttcttga atattgccct aaagtatatc ttaggttatt 480  
caacctcttc cataaactag tattttttat ccggagaaaa tgcggggggc ggggagccct 540  
ataaac 546

<210> 49  
<211> 888  
<212> DNA  
<213> Homo sapiens

<400> 49  
gttttatatt gctaggggtc tggttgtgat gtattaggca attattatga aacaattgg 60

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gtatatatat aggaataggt ttcaaaatca tatgaagttt gcgattcaga caaacttttg 120
ggggcctcag agatttttgt tattcaaaact acaggtagtg gaagtctact aaatttacag 180
acttttattc attaaaaatat cagaatcagg aattagcttg atcccccttat aaaatgtgga 240
ttcttgtgtc tatgccaca agcataaggt agcaaaactag ttgatagtta tatcaggaat 300
ctgcagagaa aaaaatacta tttagaacaa tatgggtata gatatacata aaagaaaaat 360
ggaattgaag agaaacaaaa gtgatttgaa gtaacttttg aagtcacca atatttggtg 420
gtaatcatga tcaaatgcct gcattctcatt gatgagaatt caatatgatt cagttatcta 480
catatgtgta ataagggata ccatgaaact tgaatggagg attgatattc cacttggtt 540
tgtattcatg tttcacacta agtaaagctg aagataataa ccttttgata tcatcagaag 600
tgataattta attcacatct gagcataaaa ttagggaaat gttatttctc ttttttgtgg 660
tagcattctt tgttttctca ggcaaagcag ttccagaaac aggtgtgaag ataaatagat 720
ttcaataagg aacctaaagt tgagaagaaa aaaagagctc aaacaacgtt caataactat 780
tcccatgcat tattccttta gacaacagct gttagagaaa gagatccatt atacatgtaa 840
atgatgttaa atgtaaaaat atggagacac aaagatgata aggaatgt 888

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<210> 50

<211> 772

<212> DNA

<213> Homo sapiens

<400> 50

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agttgattaa ctaggatttt ttttaaaata aagaagttac agtaaattt ttagaaagca 60
aaacaagagg cagacacatg gaacatttct gtctggacca gagtaagatt cagaatccag 120
agcatagctc agaaagccaa ttttcttact ggattttacc acagaacagc tgcactgttg 180
tagcagatct gggactaatg aatgagagct atctgggtat cgcttttcct tggttaagatt 240
gggtatattg tattctgctc ttatcaaggg cagagtgtcc tggttaataa agattgtctc 300
tggtatcgaa tgagtaccta gaataatctc taagaacctc cagtgaagta ctgaccacgc 360
acaccggcac acagtcttct ataggcgaaa gctcctctcc cctcattaca catattcatg 420
caaaacattc gcccatatca attttgctga cctttttatg cactctatta tgtaactccc 480
ataagataca atcttttcac ttaagggacc atttaaccac cttaggccca aaaaaaaaaa 540
agcacaagggt aagatatctg tgtgtgaaag agacattaaa atatcaactt caaacagcat 600
gggggagaaa acagtatgtc tcccatttct tttccaaaac aaaggaagta agaaattctt 660
tcatggtttt tgtttgtttt tcaaatacaca ctgtcctcaa ctttttaaat aataatcttc 720
cttgacagtc atttaataac ttgtgagtga tctatgactc ttattataaa gt 772

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<210> 51

<211> 508

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (217)

<400> 51

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gggctcagtg tcgcgtgggt tcaaaaataa aaactagttt ggagaaaatg aattgcaagg 120  
 gaaaaaaatt tatttcccaa agttccggtg tgaaaagtgg tctcccattt tggggctttt 180  
 gaggaggggg ttccagtgtg ggggttggtct gatctgntaa cccgggggtg gggggaaaag 240  
 gtgggttggg gtggggagag ggaagtctcg aggggtggga aagtgggagg gaagttaaac 300  
 gaggaagca aaacggggcc caagcgtctc aaaccgaaa tcccggggc tcggggggcc 360  
 accagggttc cagggggggg ccccttctgt tgggtgggga cacttcgagg tggcctcctt 420  
 ttcaggaccc aggcggggcg ggaacctttt taggctcgtg tggaagggtg caccaccagg 480  
 tccccctttt tcccccggtg gtgctcgg 508

<210> 52

<211> 558

<212> DNA

<213> Homo sapiens

<400> 52

actgtaaaca cttatacagt cttataaatg tcatggaatt ttactaaaga ggactaaatt 60  
 ctctagaaat tcattgtgga tgtgggccag cagcagttgc aatttggtc atagttttta 120  
 tcagaccagg tccccagaa gcagattcta agaagaggat tcttttgcta gtgatgtagt 180  
 aaaattgtat ttccagaaga tggctaagaa tggagatgga gggatgatgg aattcgaaga 240  
 aacatatgat agagaggaag caaacaacg gtgctactgc agacaatgtc ccagaagggt 300  
 gatatcagcc tgctaccaca gaactctggc atatgaatca tgagcttggt tgtcataatc 360  
 tcataagttc agtaattggc taagggcaat tgagcagagc aacagtgtgt gctacttagc 420  
 aaaggaaaat aattctctctg tcttctcgg tgtctttatt tcagatgctt gtcagaacta 480  
 ttctgaacaa catagaacag agacaagatt tggaatcaaa taacttatca aaagatcagg 540  
 cacggtgtca aatagtgc 558

<210> 53

<211> 600

<212> DNA

<213> Homo sapiens

<400> 53

atctgtttta gtccttgctt taaattcttt atgggcatta taccagaag tggaaattgg 60  
 ctgggatcat atagtaatat gttgaacatt ttgcggaaag gtcaaacttt tccgtagcag 120  
 ctgtgcccac ttcttaccag taatgcacaa gatctcccat ttctatatat ccttgccaac 180  
 attattttgt gttttaaaaa atataatagc tattagcagg tatgaagtag ttaaataatc 240  
 ttctttttat tctcagtgtg attctgcttt tctagaatca catctgatga taccaaatgg 300  
 acaagttaca gaaaaaacct tcatgacaat gaatgtgatt cggtaatctt tatttggggt 360  
 taatacagca gaaaaaaaag taaggctctg tgttacttcc cagataatct tgaggtcaaa 420  
 acagatccaa acttccataa attggagacc attttttggc agttaaaaag aaaagaagga 480  
 aaacaaaagc tcactctctc agcattccag ttataaattg tccctgatg accctgctac 540  
 cctgctgggt atcttcataa caaaaacagt gtgactttgg cacttggtgc acctctctgt 600

<210> 54

<211> 607

<212> DNA

<213> Homo sapiens

<400> 54

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ggtactgaaa actcggagac gaaattccta atttcctccc tcggccctac agtctttcct 60
tagcttcttt cgggacctta agtgggtggc tgtaaaagtg cccaaatgaa agcttgtttt 120
gtcggttcac caaaaagggc cttgtcactt tgctgtgcat tttagtccgc cttgtgagtt 180
gtgtcgaaaa gttaaagggt tttggcatcc ttttgtttct tggcgagtgt aggaccaac 240
cggtttaggt gttaggggga tctctgtgct gcgggagctt cttgattcct ttcctgtttt 300
atTTTTtctt ttgcttggtc attggaaaag gtccagttaa agggactggt gagttggaat 360
tagaagccta cttgtattaa cggcagaatt cgtgttcatt gctaaagatg cagtctcagt 420
aatgactttt ttttttaagg gatacagatg attgggtcaag gggaaaaatt aacacgccat 480
acaatgaaga gcaagcagct tcagagtaat tttctgatgg gtgattcttc tagcctgtct 540
cttacagttc caatggcaca tgtgctccct ctttaaggct ggaaactggg atgggaagaa 600
tgatcgg                                           607
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<210> 55

<211> 933

<212> DNA

<213> Homo sapiens

<400> 55

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accagctaca ggctatccta gaatactcca caccatcttt aagttcgcat tttaaagtgg 60
aatacggaga atgtgagggt gtttaataaa aaatcatttt tttaaattgg ttatatgttg 120
aagaaatagc ccttagagaa acaactaaaa tcataaagct atttggccta gagaagacta 180
tgaaagggac ttactcaatt tcaacctcag gaagaagaag gtgggagaag atcagtttca 240
aattagatta gaaaagcttt ctaatttttc ttttaaaaaa gctatagaaa atcagatatc 300
cctcactgaa aacttaaaaa atgggtttta gttgggaatt gctttatgtg tagacagaag 360
acaaaaactac acctgggaga gtaaaatcaa acccaaaatc tctgtgtgtc ctgtttatct 420
ggtttgtctc ccttttatct gacaaagaaa gcagggttga gaagggaagag gaagaactgt 480
ccaggacttc aggagcctca cttccttgac aggactctga cagctcaagc cccattgctc 540
actcttgctt ccaggtcta aatgtgcac tgcttggtt ctgggctatt ttgtttcagg 600
gatgttcact ttgcagataa tattgagcac agagacgcac acacacacac acacacacac 660
acacacacac agcacttagt attggatctg gcttataagt gttccataaa tgtcagctgc 720
catgaagcta gtggtgatga ggatgacatt ctgatacttc ttcctggcag tttctagggg 780
ctctgaagac acatgaatgt gtaagatgat tgtgtcacat ggaatgtgta agttggttgg 840
agatggagtc gttccagaat caggcacttt tgttgtgtgt ttggctcaaa cctcctacgt 900
gggcctgtc tcactagcgg attgaccatg agt                                           933
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<210> 56

<211> 74

<212> DNA

<213> Homo sapiens

<400> 56

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actatacttc acaacaatcc taatcctaata accaactatc tccctaattg aaaacaaaat 60
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actcaaatgg gcct

74

<210> 57

<211> 460

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (8)

<400> 57

acggccangg ctattggttg aatgagtagg ctgatggttt cgataataac tagtatgggg 60  
ataaggggtg taggtgtgcc ttgtggttaag aagtgggcta gggcattttt aatcttagag 120  
cgaaagccta taatcactgc gcccgctcat aaggggatgg ccatggctag gtttatagat 180  
agttgggtgg ttggtgtaaa tgagtgaggc aggagtccga ggaggttagt tgtggcaata 240  
aaaatgatag ccatacacia cactaaagga cgaacctgat ctcttatact agtatcctta 300  
atcatttggtt ttgagacctc gccgcgacca cgctaagccg aattccagca cactggcggc 360  
cgttactagt ggatccgagc tcggtaccaa gcttggcgta atcatggtca tagctgtttc 420  
ctgtgtgaaa ttgttatccg ctcacaattc cacacaatag 460

<210> 58

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 58

agggacctga ggctttcttt a 21

<210> 59

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 59

caccacacct tggattcaaa g 21

<210> 60

<211> 23  
 <212> DNA  
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<220>  
 <223> Description of Artificial Sequence: Synthetic

<400> 60  
 tctcctcccg acaagaagta tct 23

<210> 61  
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 <212> DNA  
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<220>  
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<400> 61  
 ggaccaggag cagcaaatac 19

<210> 62  
 <211> 19  
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<220>  
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 ctcccatcgc tccagagtgc 19

<210> 63  
 <211> 21  
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<220>  
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<400> 63  
 gaccgaaacc aacagtgcatt g 21

<210> 64

<211> 23  
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<220>  
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gtgggggaaa gatgactaaa ata 23

<210> 65  
<211> 19  
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<220>  
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tccctttgcc gttaccact 19

<210> 66  
<211> 23  
<212> DNA  
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<400> 66  
agcggctctc tcctctttct aaa 23

<210> 67  
<211> 19  
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<220>  
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ctgcctcctg atgcctgat 19

<210> 68

<211> 23  
<212> DNA  
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<220>  
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<400> 68  
tggtgctgag ccaaagattg tat 23

<210> 69  
<211> 24  
<212> DNA  
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<400> 69  
tgtgccagat acgaatgatg ttac 24

<210> 70  
<211> 21  
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<400> 70  
agcaaaacaa gaggcagaca c 21

<210> 71  
<211> 21  
<212> DNA  
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<400> 71  
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<210> 72



<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 72  
cagcctgcta ccacagaact ct 22

<210> 73  
<211> 23  
<212> DNA  
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<220>  
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<400> 73  
ccgtgcctga tcttttgata agt 23

<210> 74  
<211> 23  
<212> DNA  
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<400> 74  
ctgtgcccatttcttaccag taa 23

<210> 75  
<211> 25  
<212> DNA  
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<220>  
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<400> 75  
gagccttact tttttttctg ctgta 25